

What is Claimed is:

1. An optical apparatus, comprising:
a mount substrate;
an optoelectronic device on the mount substrate;
a spacer substrate;
a sealer substrate, the mount substrate, the spacer substrate and the sealer substrate being vertically stacked and hermetically sealing the optoelectronic device; and
external electrical contact for the optoelectronic device provided outside the sealing.
2. The optical apparatus as claimed in claim 1, wherein an interior surface of the spacer substrate is angled and has a reflective material thereon.
3. The optical apparatus as claimed in claim 1, wherein the electrical contact includes a metalized trench.
4. The optical apparatus as claimed in claim 3, wherein the mount substrate and the spacer substrate are flush.
5. The optical apparatus as claimed in claim 3, further comprising a ledge formed by differing widths between the mount substrate and the spacer substrate, the metalized trenches being in the ledge.
6. The optical apparatus as claimed in claim 1, further comprising a ledge formed by differing widths between the mount substrate and the spacer substrate, the electrical contact for the optoelectronic device being on the ledge.
7. The optical apparatus as claimed in claim 1, wherein the electrical contact further comprises:
a conductive via on a bottom surface of the mount substrate; and

8. The optical apparatus as claimed in claim 7, wherein the conductive structure is a solder ball.

9. The optical apparatus as claimed in claim 1, further comprising a passive optical element formed on a surface of the sealer substrate.

10. The optical apparatus as claimed in claim 1, wherein electrical contact further comprises a conductive material on at least two non-parallel surfaces of the mount substrate.

11. The optical apparatus as claimed in claim 1, further comprising, above the sealer substrate, an optical block having a passive optical element on at least one surface thereof.

12. The optical apparatus as claimed in claim 1, further comprising, above the sealer substrate, an isolator stack including first and second polarizers and a Faraday rotator sandwiched between the first and second polarizers.

13. The optical apparatus as claimed in claim 1, further comprising, above the sealer substrate, another spacer substrate.

14. The optical apparatus as claimed in claim 1, wherein at least two of the mount substrate, the spacer substrate and the sealer substrate are of materials with approximately same coefficients of thermal expansion.

15. The optical apparatus as claimed in claim 14, wherein one of the at least two substrates is silicon and another of the at least two substrate is Pyrex.

16. The optical apparatus as claimed in claim 1, further comprising, on a terminal surface of the optical apparatus, a mating feature for mating the optical apparatus with another structure.

17. The optical apparatus as claimed in claim 16, wherein the another structure is a ferrule.

18. A method of aligning an active device and a lens, comprising:
providing the active device on a mount substrate, the active device having an active area on a side thereof;
positioning an angled reflector relative to the active area in accordance with a radius of curvature of the lens;
viewing the active area reflected by the angled reflector;
positioning the lens in accordance with the viewed active area.

19. A method of creating a plurality of optical apparatuses, comprising:
patterning a conductive material on a mount wafer;
populating the mount substrate with optoelectronic devices in accordance with the patterning;
stacking and securing a spacer substrate on the mount wafer;
stacking and securing a sealer substrate on the spacer substrate, wherein the stacking and securing of the spacer substrate and the sealer substrate on the mount wafer hermetically seal the optoelectronic devices; and
vertically separating the mount wafer to form the plurality of optical apparatuses, the vertically separating including exposing a portion of the conductive material outside the hermetic seal, each optical apparatus includes a mount substrate, an optoelectronic device, a spacer substrate, a sealer substrate, and exposed conductive material.

20. The method as claimed in claim 19, wherein stacking and securing of the sealer substrate to the spacer substrate occurs before stacking and securing of the spacer substrate stacked to the mount substrate.